

# San Francisco Bay Conservation and Development Commission

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February 20, 2019

**TO:** Bay Fill Policies Working Group Members

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**SUBJECT: January 17, 2019 Commission Bay Fill Policies Working Group Meeting Summary**

**1. Roll Call, Introductions, and Approval of Agenda.** Chair Barry Nelson called the meeting to order at the Bay Area Metro Center, 375 Beale Street, Ohlone Room, First Floor, San Francisco, California, at 10:36 a.m., and asked everyone to introduce themselves. Bay Fill Policies Working Group members in attendance included Chair Barry Nelson, and Commissioners Katerina Galacatos and Jim McGrath. BCDC staff in attendance included Megan Hall, Erik Buehmann, Brenda Goeden, Steve Goldbeck, Shannon Fiala and Anniken Lydon. Also in attendance were John Coleman with the Bay Planning Coalition, Kelly Malinowski with the State Coastal Conservancy, and former Mountain View Commissioner Ms. Patricia Showalter who now attends as an interested party.

Chair Nelson asked staff to start with Item 5 in order to give additional members a chance to arrive.

**2. Approval of December 20, 2018 Meeting Minutes.** The Working Group members approved the meeting summary for December 20, 2018 as presented.

**3. Fill for Habitat Bay Plan Amendment timeline.** Ms. Hall continued discussion of these items after the Working Group finished discussions on Item 5.

Ms. Hall stated: I will very quickly just remind everyone of the urgency of the process at hand. We now have the initial, public, hearing date of June 20<sup>th</sup> which means that the staff report has to be mailed by May 17<sup>th</sup>. Internally that means we are trying to get a decent draft of it written by the end of March.

We are planning to meet every month until this happens. I think 10:30 to 12:30 might be ideal from now on. I am going to also outline the schedule of briefings and a workshop that we are thinking of right now.

**4. Discuss Amendment Workshop plans.** Ms. Hall continued: We did say in the brief descriptive notice that we would have a public workshop before the initial hearing. I know from past minutes there was some discussion of potentially holding a technical workshop or retrospective about what we learned from restoration in the Bay.

When we were mulling over all of these thoughts on workshop goals, we came to the conclusion that policy workshop would probably be best. This would entail a discussion of actual policy options, but in order to prepare the Commission for that to really make sure that they are aware of all of the issues and the science that has led us to this policy decision, it might be a good idea to have a series of briefings leading up to that workshop. And so we are proposing to have three briefings – one at every Commission meeting starting February 7<sup>th</sup> and going up to March 21<sup>st</sup>, which is the proposed date of the workshop on three different topics related to science or restoration of retrospective in the Bay.

The first thing that we are suggesting is to have a historical context laid out by Michelle Orr. We actually just found out that she cannot do this day, but we can either move her or have someone else come to speak on the same topic. She has a presentation outlined – 40 years of restoration in the Bay. It talks about some lessons learned from all of the restoration work that has been done in this region. From talking to her we were thinking we could also add in a few additional items on future directions and where those lessons learned have pointed us. That is what we were thinking for the first of these workshops.

The second workshop would address what exactly we mean by Bay fill. So when we are looking forward, what are these types of Bay fill that we may see? What are the broad purposes that we may expect from future Bay fill? We will deal with things like fill for a transition zone versus fill for marsh augmentation to raise the elevation versus fill in sub-tidal habitat or fill that is used to create a marsh or an island, and what are the approaches to those different types of fill? We are considering a few different people but we are definitely open to suggestions for others that might be best able to address this. For all of these topics, we are thinking that having a couple of presenters, or even a small panel, would be okay, but the issue is we're restricted in the amount of time that we are able to use in the Commission meetings. So we are trying to balance those two things.

Ms. Fiala added: This is ultimately going to be dependent on what else is on the agenda. And that is outside of our control.

Chair Nelson agreed and added: Yes and there might be some of these workshops or briefings where Larry says, you can have 20 minutes and there might be some where you can have an hour.

Commissioner McGrath stated: These are the right people.

Ms. Malinowski explained: I would wait for Michelle if you can. We just did all of this for the Restoration Authority's Advisory Committee last year.

Commissioner McGrath noted: Michelle is pretty much a star. (Laughter)

Ms. Hall stated: Based on Michelle's availability we may have to swap her date with someone else's. That is something we need to work out.

And the third briefing topic that we definitely want to get in before the workshop is "what are the potential consequences of these types of fill?" When we are talking about filling on this large scale, and the possibility of projects throughout the Bay using larger amounts of fill

than have been allowed before, we will certainly be getting some habitat-type conversions and other impacts. So what are the expected effects of that on the ecology? How can we expect the Bay to change at a small and at a larger scale?

Chair Nelson offered the following: It might make sense to change consequences into benefits and impacts just to make sure that folks understand that there are some hard tradeoffs.

Ms. Hall continued: And so really this one is about tradeoffs and recognizing that we are dealing with two uncertain scenarios. Sea level rise is a prediction. We know it is going to happen but how much exactly and what impact it will have and when – all of this is still up in the air. And we also know that filling will likely have some consequences. You are dealing with the tradeoffs of those two things. This briefing would be especially useful as a panel because there are impacts that transcend ecology and very different living groups and it might be useful to have several different perspectives on that. Based on time we may have to limit it.

These are our thoughts. We also have an idea to potentially have a fourth briefing after the workshop which is the bigger picture talking about accommodation space versus habitat squeeze. It is the idea that ultimately these things will need room to migrate with time versus keeping them contained. We are thinking about the tradeoffs there and where it will be possible to allow things to accommodate and should we be able to acquire land behind it and things like that. This one could be still useful as well.

Chair Nelson commented: I found that description confusing so you are not crafting the language for the Commission yet. But I got a little lost walking through that. (Laughter)

Ms. Goeden explained: This is basically the idea of accommodation space versus containment.

Chair Nelson added: But accommodation space is also used in a flood management context. For example, in the Delta all of that subsided land in the Delta that has people living in it, hydrologists call it accommodation space from a flood-risk perspective.

Ms. Goeden opened: That is the same idea.

Chair Nelson agreed: Yes but it is a little different. And this is where I got confused because it seems to me that paradigm is a little different when you are talking about, “does that block of habitat have the ability to change over time?”

Ms. Goeden added: That is one of the things I am hoping the Commission gets out of this particular item and I think it is potentially beyond the habitat piece. Mark Stacey has come to the Commission a few times to talk about his modelling of the South Bay versus the North Bay and the changes in sea level rise. But what he hasn’t talked about in detail is the idea of providing accommodation space or seawalls and then the context that there are a lot of people who are thinking, oh we’ll put up a seawall but then we will put a wetland in front of it. And that will help us with sea level rise. And his work shows that really doesn’t help us with sea level rise because it is a false thought that you are accommodating sea level rise by putting a wetland in front of it. You are not because the water needs to move backwards to accommodate sea level rise. This is part of a way of addressing that thought that we put a wetland in and that is going to solve our problems. And his work is really showing that this is not the case.

Chair Nelson commented: Then that gets to your point that there may be places where green and gray infrastructure work together and there may be places where they don't.

Mr. Goldbeck offered the following: The wetland may knock down the wave intensity and protect development behind it but it may have impacts in other parts of the Bay.

Ms. Goeden continued: What I am talking about specifically is a seawall/wetland combination. If there is a seawall behind a wetland I don't know that the wetland is doing anything to help the seawall. The seawall is still the final barrier.

Mr. Goldbeck stated: But the seawall can be lower because the wave crests are knocked down by the habitat. Anyway we don't have to get into a big, technical discussion.

Ms. Goeden explained: This is what he started talking about now that is important for people to have a little deeper conversation about.

Ms. Fiala commented: My understanding is that he was trying to model a 100-percent containment strategy against a 100-percent accommodation strategy and what impacts that would have on water levels.

Ms. Goeden agreed: Right and that was his first stage and he has gone beyond that now.

Chair Nelson added: That sounds really interesting but I didn't get that at all when I read that report.

Ms. Hall continued: I guess the question is, how essential is that for them to make the decision on these policies?

Ms. Goeden asked: Is there a concern that you are having too many ends too far out – let's go to that.

Ms. Hall responded: Well this would be after the workshop. We can discuss the specifics.

Chair Nelson continued: Those first three sound great. It seems to me that they flow in a natural order but scheduling may not give us the luxury of scheduling that way. I look at that fourth one and that seems to me like an interesting conversation that doesn't have to happen before the workshop. So I am okay with that. Are there missing concepts here? Are there things that are not in here?

Mr. Buehmann commented: I do want to speak to the fourth one and it probably doesn't have to happen before the workshop but you may want to have it before the hearing, because I feel like it really speaks to an assumption that underlines this whole policy endeavor.

Ms. Fiala commented: A part of the original motivation of this was exploring the idea that Jim raised long ago, almost a year ago now, about the idea of having some sort of a science workshop. We are trying to figure out what would be the most useful, to the Commissioners in particular and the public.

Commissioner McGrath commented: The purpose was bringing the Commission and the public along as we work through it. There is one topic that I would like to see covered in the first piece, the historical context. One of the briefings that just gob-smacked me was the Bay Model. I have never forgotten this with the people from State Lands that talked about the genesis of what we see in the Bay. And sea level rise didn't reach the Bay in the last period until 8,000 years ago. It happened very rapidly. So everything you see in terms of sedimentary features that have habitat value in sustaining endangered species happened in the last 8,000 years. And they happened with some floods that left a lot sediment on the shoreline and then got redistributed. So from that perspective understanding the natural process of how these features formed and how we can mimic that, I've never been quite as frantic about fill as some people. I look at it from the perspective of missed, real, dynamic process formed all these features that I love in the Bay and that sustain us in our food sources and our beauty. So I just want to make sure that the speakers cover that and if they don't I will. (Laughter)

Ms. Fiala added: It is almost like a quick primer on how wetlands function or wetland basics. Is that what I am hearing?

Commissioner McGrath replied: Well I think more of in terms of how did we get here?

Chair Nelson stated: That sounds very chapter one.

Commissioner McGrath agreed: Yes, yes, exactly.

Chair Nelson continued: And that links together. We frequently in these conversations talk about fill over here and sediment over there and this is the part of the conversation that knits the two together.

Commissioner McGrath stated: Continuing on that note, if we look around the Bay and we look at risk and areas that we are going to have to either spend a whole ton of money trying to protect or walk away from, there are areas that we thought we could fill a little too blithely. Sometimes it is groundwater that fits. When you talk to the people preparing the efforts at Foster City they acknowledge that in about 60 years they are toast. They just don't have the room to do anymore. And the more fill you stack up the faster the mud consolidates and the like. The physical realities--the engineering realities--have finally dawned on us: that we can't continue to do what we did for that period when we reached out into the Bay and filled a whole lot of it.

Mr. Goldbeck chimed in: It's amazing and my mom said way back in the day when they built Foster City that it's just going to sink into the mud and go back to the Bay. And she was right. (Laughter)

Chair Nelson continued: I want to go back to our previous document for just a second. The mistake in the paradigm that we have had since California became a state is that we tend to look at the map and think that map is not going to change. We now know that sea level rise is changing which means the map is going to change. We're falling into a little bit of a trap there by talking about 2100 as sort of the outer edge and we need to explicitly recognize, not just that sea level is rising but, that adaptation is going to involve phases. There are strategies that will work for us for the next 25 years and those strategies may be absolutely necessary and may

be completely ineffective in the next 25 years. We need to explicitly adopt a phased strategy that acknowledges that we are doing it because some problems we don't have to worry about today and we can worry about them in 25 years.

Commissioner McGrath emphasized: But we are going to have to worry. (Laughter)

Chair Nelson agreed: Yes, we are going to have to worry but let's not worry about that one yet. And then there are solutions that we are going to have to implement now and they will fail. In the Delta there are great examples of strategies that we have to implement for the next 25 years and they may totally fail a quarter of a century after that. And acknowledging that phased approach is a really important thing for us to do.

Ms. Fiala asked: Do you think we need to have a whole separate briefing on adaptation pathways? That could be a chapter of the forthcoming OLU report as well.

Chair Nelson replied: That might be really helpful. I totally failed to persuade the Delta Steering Council to explicitly adopt that approach for the first steps. It just didn't go that far.

Commissioner McGrath spoke: There's something that we are going to need John's help on because this is a different worldview of economic assets and real estate as an economic asset. We are not ready for it. One of the things that caused the blow up of the first round of the Bay Plan Amendments for Climate Change was, in fact, the idea that somehow real estate is forever and it is not. On the other hand, I am right down the middle. Some people are arguing, "oh we have to plan for 10 feet of sea level rise and we have to abandon the marina and everything west of it. We have to do that right now." But wait a minute. These are assets which are valuable to peoples' recreation for at least 60 years. You may not have a lot left in your investment in 60 or 80 years but that doesn't mean it is worthless. It means you have to think differently economically. And to make that change, we're going to need business help because it is a different way of thinking.

Chair Nelson asked: Any other thoughts about these briefings?

Ms. Hall asked: Or preferences among the suggested speakers?

Ms. Fiala added: Just to give you a little more context about the workshop; on the 21<sup>st</sup> of March what we are envisioning is more like a poster reception. So if you feel strongly about that we would like to know that too. We are imagining almost taking the memo that we were discussing and turning it into a series of posters guiding the attendees to the preferred policy alternatives. This will be in the actual workshop.

Chair Nelson commented: I thought that worked great and having folks rotate through stations worked way better than I would have expected too.

Commissioner McGrath added: I will put up with all of the speakers. (Laughter) I mean this is just learning stuff. I will do whatever is required.

Ms. Hall stated: I'm glad to hear that everybody is onboard with this plan. If you do have any other thoughts or comments let us know.

Ms. Goeden suggested: One other thing to think about is groundwater and what it means in the region. It is a big deal from the perspective of intrusion.

Chair Nelson commented: We touched on today about this increased focus on regionalism, regional planning. And I am just wondering whether our three topics – I mean that is probably a Chapter 2 topic.

Ms. Hall added: And Chapter 3 because you are thinking about what are the consequences or tradeoffs of more of these projects happening region-wide?

Chair Nelson emphasized: We have to think regionally and that is a really important issue to make sure we get Chapter 1 but we've got to think regionally in ways that we haven't really thought of before.

Ms. Showalter commented: I think that there should be something about economic potential consequences, there should be something about economic benefits of habitat restoration. If we could get somebody who would talk about that a little bit it is good.

Mr. Coleman suggested: Well you could bring someone in from the business community to be part of that presentation. California is evolving and maybe things are going to change.

Chair Nelson stated: That sounds like an absolutely critical topic, but it might be one of those topics that could either be before or after the workshop.

Mr. Buehmann opined: It has important implications for how we deal with the sea level rise guidance as well and the risk-aversion analysis. It talks about what kind of risk-aversion issues you look at and you have to look at the economic consequences of whatever the economic benefits might be. The guidance wasn't really written with a lot of thought to restoration projects and how they would play in with the guidance. And that is something that I have been struggling with in looking at that stuff. And that kind of discussion would be really helpful.

Mr. Coleman stated: And the economic consequences of doing nothing.

Ms. Goeden asked: If you revise the brief descriptive notice what does that do?

Ms. Fiala explained: We would have to notice that for 30 days and then the Commission would have to vote to approve the revisions. If we set that ball in motion now it might not affect the initial public hearing date. If we were going to decide to do that we should do it as soon as possible.

Mr. Goldbeck added: The final vote would be 90 days behind that but I still think that is okay.

Ms. Hall clarified: So you all feel that you want to add the introductory section to the brief descriptive notice.

Chair Nelson added: Just to be clear; that was not covered in the original brief descriptive notice. So all we are doing is saying this is another section of the Bay Plan that we are contemplating changes to. Yes, I think we want to do that.

**5. Discussion of Fill for Habitat Policy Challenges Memo.** Ms. Hall presented the following: With the memo we will start with where we left off last time. We got through the Middle Harbor discussion and that brings us to "Habitat Specific Bay Plan Policies in Light of Sea Level Rise".

We are on page six of the memo, the January 10<sup>th</sup> copy. Based on our discussion last time, the first few sections were updated with comments that the group made. I will also note that I didn't receive any written comments except for Commissioner McGrath's comments and his were not really directly on the document as much a framing of the argument.

Section d - Habitat-Specific Bay Plan Policies in Light of Sea Level Rise is broad and sort of a catch-all for the potential need for specific policies surrounding a lot of the habitat-specific fill types that we may be seeing. We may see things like oyster reefs and eel grass beds that require a larger amount of fill. We may see things like transition zones and we should think about how all of these different types of fill will have different implications. Do we need more specific policies for guidance on subtidal habitat and transition zones?

Chair Nelson noted: The Bay Plan is full of wise thoughts from 50 years ago about what we like and don't like. We have a whole new list in light of this process of those kinds of things, so my opening thought is – absolutely, we need a discussion of reefs, transition zones, eel grass, new habitat, sediment and all of these issues that we are talking about. The Bay Plan has lots of great general language about those issues. It has nothing on these issues.

Commissioner McGrath chimed in: But I would ask; what level of specificity do we need? Science moves on. If you look at eel grass or oyster reefs – I don't think it is appropriate or necessary for the Bay Plan to delve down to the next level when such a project becomes a restoration project under the McAteer-Petris Act. I think what we are trying to do here is say, under the McAteer-Petris Act habitat restoration is appropriate and there is a new purpose that we want to add which is being able to keep up with sea level rise. Exactly what that is, I mean I've studied sediment for 40 years and I can't tell you what the sedimentation rate in the Bay is. I can tell you why it matters. And I think that is all the deeper we need to go.

I think we can say that unlike 50 years ago, we have created a template in terms of subtidal habitat and Baylands that, while it is not regulatory, it is revelatory. That doesn't mean we are going to pursue a project on that no matter what and I don't want to create a Bay Plan that says that. I want to always, always be using the best science.

Mr. Goldbeck offered some information: The Bay Plan was updated to address the first iteration of the habitat goals and that was in the 2003. So some of that stuff is more current than way back in the day and we have done the sediment and subtidal. I definitely agree that it needs to be more updated, but I also agree with Jim that it should be general which is the way the Bay Plan works. It doesn't get really specific.

Chair Nelson chimed in: There is some language in there about transition zones and where we prefer gray and green infrastructure. I think we do want some language about those issues. We want to encourage transition zones. I am not sure that we need to drill down enormously deeply and say, it is pretty clear there are places where transition zones are facing enormous limitations because of the geography of local conditions. I think if we have language encouraging transition zones that is a good thing. But I'm not sure we need to lay out an algorithm for the circumstances under which we are going to require it because there will certainly be places where we see marshes restored that are going to drown in the next half a century.

Commissioner McGrath added: Or some transition zones that perhaps won't be as marshy as we had hoped. There is a specificity trap here and I ran into it dealing with my city and sea level rise work. The sentiment of, of my God we have to panic and plan for 10 feet. That just makes me crazy. You look at what we really know, the 95 percent certainty level for sea level rise and the range for 2100 and the idea of adaptation and that you can't do it all at once.

Transition zones are valuable on their own and they are valuable because they give you a hedge against the complete loss of marsh. But I don't want to create a trap where the transition zone must become habitat type A or B within a certain period. I don't want to unnecessarily fill marsh for habitat. I want to keep that stricture. We should allow for transition but trying to define exactly where they are gets you into a specificity trap. My problem in Berkeley is that if you start planning for 10 feet of sea level rise you do nothing for current flooding problems. It paralyzes everything. And that's the problem I see with too much specificity.

Ms. Goeden commented: I want to bubble us up to see if we can get to a bit of specificity about what we are talking about. Barry you directed us to the second-to-the-last bullet which is noting the importance and encouraging of these activities. Megan are you referring in this bullet primarily to the early sections of the Bay Plan that talk about fill and the detriments of fill and potentially adding language there in general about the benefits of fill for projects that support habitat? Is that the intention of this?

Ms. Hall replied: No. It was more intended to mean should we bulk up the language that we do have surrounding transition zones?

Ms. Goeden continued: Okay. We were in that conversation last time. So we did have a conversation about the very early part of the Bay Plan which talks about fill in a pretty detrimental way.

Chair Nelson added: Right. And we talked about flipping that.

Ms. Goeden agreed: Yes. And so we already noted that we want to do that?

Ms. Hall answered: Yes. We also noted that it will require a revision of the brief descriptive notice. Here I was more thinking within the natural resource policies. Do we in any capacity want to add more specificity there or bulk it up? We are here talking about just how much we really do want those activities to be happening. It would be a finding most likely.

Ms. Showalter commented: I just want to make sure that we carry that positive potential of fill through all of these discussions. Reading through this it is kind of neutral on it. Do we want to specifically say that fill may be a tool for making these things happen?

Chair Nelson noted: We covered that in our last meeting. We agreed on this up front.

Ms. Hall agreed: Yes, up front we definitely want to add that kind of more-positive connotation with the term.

Ms. Showalter continued: And I am wondering do we also want to make sure that it is embedded in the language?

Chair Nelson had a suggestion: I would like to suggest one place where maybe we want a little more specificity and that is the third bullet from the top there. There may be places where we want to allow fill to raise marsh plain elevations to give wetlands a chance to keep up and to allow transition zones.

Ms. Showalter suggested: So we might want to say, where it is appropriate and beneficial.

Chair Nelson continued: I don't know that we need much specificity about exactly where. Of course there are lots of criteria there. How certain are we of the science? Is there room for transition zones without needing Bay fill? What is the detail in terms of local sediment sources? I don't know that we need to develop those sorts of criteria here. We definitely want to acknowledge that this is a big paradigm shift. So this is not just a place where we might allow fill in the Bay to create habitat X. We might take some of those habitats we've been fighting for these many years and we might say, yes – we are going to allow and encourage the filling of existing, high-quality habitat in order to allow for adaptation.

Commissioner McGrath commented: My prism for looking at habitat restoration has always been fundamentally endangered species. If you can recover endangered species it is good for the economy and it is good for the rest of the habitat too. So we have salt marsh harvest mouse and we have Ridgway's rail and they require a transition zone. If I am looking at an area at risk from sea level rise and I have a viable population of salt marsh harvest mouse, I'm looking at the value of a transition zone as a hedge against the loss of that particular population area. And I think that is really important.

Chair Nelson added: But there is the flip-side of that; that is one of those irregular points. That is one of the other criteria that we would be considering. If marsh X does not have endangered species but might, it would be more likely to allow fill with fewer restrictions than if it already has an established population –

Commissioner McGrath interjected: If we are pretty sure it can repopulate.

Chair Nelson agreed: - right. But those are criteria we are going to consider, and I don't think we need to try to nail all those criteria down now.

Mr. Goldbeck stated: And again, I don't think we are wanting to wordsmith where it is just a general approach.

Commissioner Galacatos cautioned the group: The only thing that I would caution is anytime you are starting to say that you are going to allow for a certain fill in these other tidal wetlands you have to remember that other agencies, not just the Corps but the Water Board have a no-net-loss policy. And so you would still find that in that transition zone or somewhere else they would have to provide that mitigation. In spite of the current federal administration, we would still have the Regional Water Quality Control Board and they have a stricter no-net-loss policy than the Corps does.

Chair Nelson replied: That is a good point, but those other policies apply to habitat just as they apply to other types of projects.

Commissioner Galacatos clarified: I am just saying that it would have to balance out in a way.

Ms. Lydon commented: And I think that is the sticking point as long as we do have healthy populations of endangered species – that is where transition zones become an issue not necessarily just for BCDC. The U.S. Fish and Wildlife Service has a particular issue with filling for the future if you have a healthy population of clapper rail. That is something that we need to consider.

Chair Nelson continued: If you have a wetland today, if it looks exactly the same from the air and it has a healthy population of an endangered species, and the exact same wetland that has no listed species in it, we might reach very different conclusions about the same proposal. Can I build this wetland to build that transition zone or raise the marsh plain elevation.? That wetland might look the same from the air but we might respond to it very differently.

Ms. Hall commented: I don't want to put the staff on the spot but I am going to. (Laughter) We will continue to have these conversations. Thinking about if you were to get proposals today – let's say we open it up to minimum fill necessary, and projects are proposing larger transition zones or more modification of subtidal habitat; do you feel that you have the tools you need in the Bay Plan to properly assess those applications? Or do you feel that there might be a situation where you would have trouble making a decision?

Ms. Goeden commented: You are saying if we get rid of the "minor amount of fill" and just use "minimum amount necessary" –

Ms. Hall answered: Yes.

Ms. Goeden continued: - I feel like we have the tools. The challenges are that we have to balance multiple policies and so the plusses and minuses – we have to find the sweet spot. The case you are talking about – the marsh of endangered species versus one that is not; we would apply the policies differently that we have. But the challenge on the minimum amount of fill necessary gets to be a bit of a temporal challenge because for what period and so if someone wants to build a very large transition zone that we won't see habitat benefits for until sea level rises to a certain point, and until that time it is really upland habitat, that is a challenge. It is a balance of benefits because we don't know. We will know what the initial impacts are but we won't know what the future benefits are to offset the initial impacts.

Chair Nelson responded: We know that we are going to remove some handcuffs that are in there now; things like Bay Fill policy regarding Middle Harbor and the minimum fill issue that we felt on Sonoma Baylands as a real constraint. We should absolutely reflect the temporal challenge. That is important to reflect and you are right Katarina that those no-net-loss policies apply. We don't have a strict, formal, no-net loss policy. I mean we have requirements about mitigation and so forth, but we don't have no-net-loss policy written in that language. I don't think we need to change that now. And that challenge is going to be a challenge for a responsible agency with that written into their programs in the future because in the future no-net-loss compared to what?

If sea level is rising and shorelines are eroding and we are losing wetlands and we are building transition habitat – okay; if you are trying to maintain a no-net-loss policy, that is a very, different calculation than it was 10 years ago. And that is going to be a challenge for your agency, but we haven't framed that issue in that way, even though in practice we have had a no-net-loss policy.

Ms. Goeden replied: I don't think we've had a no-net-loss policy. For most of the wetland restoration that we have authorized most of it has been characterized as self-mitigating. We often have not required mitigation where the Water Board or the Army Corps has, partially because they also have the added burden of seasonal wetlands which we don't. This is a definite difference. We usually do self-mitigation as a way of dealing with this issue.

Mr. Buehmann added: And then the question there is when you come in with an application, are you providing the information necessary to support it?

Chair Nelson stated: I agree with all of that, but you are allowed to change habitat types. But I can't think of a lot of examples where an applicant has walked in and said, I've got two acres of habitat today and when we are done, I am going to have one acre of habitat.

Ms. Goeden agreed: No, they generally don't do that. They usually go in the opposite direction.

Mr. Goldbeck commented: That is what we were looking at with the proposal by U.S. Fish and Wildlife Service in the North Bay. To take the low-value tidal marsh because there is no channel, dig out channels and use some of that to make transition zones on top of existing tidal marsh. So there was a potential net loss, but it was degraded habitat and it quickly turned into a benefit. So I don't think that is not a bad example. It is a good example of why we should allow it.

Commissioner Galacatos added: But we have quite a few of these projects right now where basically the push by the U.S. Fish and Wildlife Service to have transition zones is really increasing the amount of fill in either tidal, brackish or seasonal wetland to provide for that habitat. We are seeing those projects a lot now – a lot more than five years ago.

Commissioner McGrath commented: There are really two categories. When we formulated projects at the Port of Oakland the guidance that we had was no-net-loss of Bay area involved, and so we were always looking at making sure that where we were filling, we were pulling out fill because of the guidance. So I think that guidance is good and responsible developers will react to it. It gets a little more complicated when you talk about transitions because there are no empty ecological niches. Some existing habitat may be seen as less valuable than other habitats, but it is still habitat. It's not useless. I think you want to provide caution with that, but I don't see a need to, or a Bay Plan that would, unripe the McAteer-Petris Act and Bay Plan provisions that assure no-net-loss of Bay surface area volume. So that is a backdrop. That is a certain level. That is a floor. Dancing through transitions – my concern here; while opportunities to use fill, whether it is dredged material or something generated in a flood-control project may be opportunistic, I think what we want to create here is something that doesn't sacrifice habitat for opportunity.

Let's go back to the example of a place where you've got high-value, endangered-species habitat that may not be good for 40 years – come back in 20 years with your transition zone. And you've got some other area where you don't have the same kind of loss of habitat that may or may not be appropriate for the opportunity. I think what we want to do is steer opportunistic zones into places where it makes sense.

Chair Nelson continued: I am thinking we have probably given you enough thoughts about this item. Maybe we can move on to the next one.

Ms. Hall continued: Adaptation for regional habitat goals – I don't know if this is the most appropriate title for this section but this is really trying to get at the things you keep bringing up Jim about making sure that projects are happening where they are appropriate; working with the environment, designing with the environment and to what extent we as a responsive, regulatory agency can direct any of that in our approval of permits, because it is very much that the applicants come to us with a design already.

Chair Nelson replied: One of Jim's comments in the note we sent around was doing that planning on a landscape level. And that concept I don't think is in the Bay Plan now.

Ms. Hall answered: Well the Baylands Ecosystem Habitat Goals, the original report, is mentioned in there in several places – in the findings at least.

Ms. Goeden added: Well it also in the tidal, marsh policies and it says something along the lines of any tidal marsh restoration should be consistent with the Baylands Habitat Goals Project.

Chair Nelson commented: Yes, but what is missing there is a sense that it is our job to encourage landscape-level habitat planning. The Baylands Goals were something that we were involved in, but that was kind of reacting to something somebody else did. I'm not sure exactly how this plays out in the next 20n years but we have said, generally speaking, as in the case of applications for fill– bring us a project and we will issue a permit or not. And we have treated habitat the same way. And if it was somebody's job to do regional planning, we assumed somebody else is going to do that. To the extent that we are trying to make sure that we are responsibly providing leadership on regional adaptation I think the Bay Plan needs to say, "it is our job to make sure that habitat planning happens at the landscape and the regional level".

And we still want to have that language about regional habitat goals. But I could imagine 10 years from now we are going to have a different kind of habitat strategy. We might have a North Bay and a South Bay habitat strategy that dovetails with flood protection and planning for habitat is going to be part of that. I think the Commission gets now instinctively – oh, we have to plan to protect our communities at the regional level. I don't think we have been as explicit about the need to do the same thing on the habitat side of our mission. Where that is going to go, I am not sure, but we want to make sure that this landscape message that Jim was talking about is really front-and-center. Until now we've kind of assumed that this was somebody else's job.

Ms. Hall clarified: So you think that adding language even though we already have some in there would still be beneficial?

Chair Nelson agreed: Yes, because I think the language in there is about encouraging consistency with somebody else's habitat goals.

Commissioner McGrath stated: Well I'll read it to you. It says, "The Baylands Ecosystem Habitat Goals Report provides a regional vision of the types, amounts and distribution of wetlands and related habitats that are needed to restore and sustain a healthy Bay ecosystem including restoration of 65,000 acres." So I am for all of that. These recommendations were based on conditions of tidal inundation, salinity and sedimentation in the 1990s. "While achieving a regional vision would promote a healthy, resilient, Bay ecosystem, global climate change and sea level rise are expected to alter ecosystems processes that may require new regional targets for types, amounts and distributions of habitat."

So I think that is great as far as it goes. The science has moved on and the Aquatic Habitat Institute has now begun to look at different regions with the landscape of – I don't like OLU's – but I love the work. We've got an opening right here in our findings to add and say – remember what I said, I always want to use the best science – "as science improves and indicates the landscape visions, this vision of the ecosystem's goal will appropriately be changed".

Chair Nelson added: And a friendly amendment; we actively want to encourage that. That language about regional habitat goals is pretty passive. It doesn't talk about the Commission's role in that process. We may not ultimately be the ones leading this – it may always be the Aquatic Habitat Institute doing some of this work. But we need to see that as part of our adaptation mission. Our goal should be to make sure that this stuff happens rather than just waiting for someone else to do it.

Ms. Goeden concurred: I totally agree with you. I would point you to the end of the tidal marsh policies, the subtidal area policies, the dredging policies and a couple of others that say, the Commission shall encourage the best available science in these areas. I think we already do that. But the other thing that is interesting about some of our policies is some of them are, for lack of a better term, advisory policies versus policies that we can really, truly enforce. So if you look at the language in some of them they say things like, we should encourage land to be set aside for future transition zones or future restoration. We don't have any ability to actually do that. So it is more of an advisory policy that we have.

Chair Nelson commented: So one example that I could imagine – if somebody came to us with a proposal for a big transition zone; I could imagine the Commission doing something in the future that I don't think we've ever done in the past and that is saying to an applicant, no – we are not going to let you do project X until we see how it fits into a regional strategy.

Ms. Goeden replied: I don't think we've ever done that.

Mr. Goldbeck added: But we've never had a proposal for a huge transition zone.

Ms. Fiala chimed in: I appreciate that you all haven't seen the SFEI report yet, but would you even go so far as to say where certain adaptation strategies are feasible and geomorphologically or hydrologically supportable? Where it has been determined based on a series of type criteria whether certain strategies are even feasible. And so you could imagine a

policy analysis as specific as – is the applicant recommending something that is consistent with that report? We could even take it to that level of detail but then that could potentially become outdated very quickly.

Chair Nelson chimed in: I don't think this requirement for regional landscape or planning is something that affects us in the next five years so much. But 10 or 20 years from now we are going to be facing some very hard choices. And we have traditionally approached lots of habitat projects on a case-by-case basis. I think we are not going to have the luxury of doing that. As we start being faced with those tough choices, do we let that habitat go, do we convert that habitat to another type, and do we sacrifice a portion of that habitat for a transition zone even though it may have some real impacts? I can't imagine how we can make good decisions without some regional guidance. That means we need to affirmatively say, we know that we need that as part of our adaptation guidance moving forward.

Commissioner McGrath noted some specificity: I can get more specific. After the findings come the policies in the existing Bay Plan, and it says that any restoration project should include clear and specific long-term and short-term physical goals, monitoring, et cetera. And then it has a list of A through H and none of that is landscape and long-term viability. And the problem with that, and the benefit of the OLU approach, is if you write the dikes in a place that doesn't receive sediment, you are going to get a pond not a marsh. And that may be exactly what you want. But the context which I would like to see (because I think this is a fine policy as far as it goes) is the morphological future in terms of what sediment is coming in and sea level rise likelihood, and the temporal thing needs to be part of this evaluation.

Ms. Goeden noted a caveat: So you are walking right into the trap. (Laughter) The trap that the staff has already found itself in is that when a restoration project comes forward, we ask them, what is the life of your project? How long do you anticipate this surviving? What is your adaptation plan? How are you going to adapt this project to sea level rise? And they say, we're not going to. We don't have any ability to adapt to sea level rise. We don't have the money. We think we'll be there for 20 years and that is it. I am not kidding – this is the Fish and Wildlife Service in one particular instance. Then we get into a fight with our sister agency about whether or not their project should be adapting to sea level rise or not.

Chair Nelson interjected: But they have a responsibility.

Ms. Goeden continued: And then you get into a question about size sometimes. So this is a little marsh – is it okay for it to go away or is it part of this larger adaptation piece in this region that should be restoring all of this to marshes. We have a very similar situation at Blue Harbor where we had a project and it was a development project that was going to raise elevations and within a certain period of time there is going to be no connectivity to land.

Commissioner McGrath interjected: The road, right – at least at high tides.

Ms. Goeden continued: And this is kind of a similar parallel in the habitat world of how do you build that?

Ms. Showalter commented: When I read this, what came to my mind was that in my experience the problem with monitoring is that it is much too project-specific, and it is very expensive, and it doesn't provide us with information that anybody ever uses or hardly anyone ever uses.

Chair Nelson added: And that it should be regional.

Ms. Showalter repeated: And that it should be regional.

So that was my takeaway is that we should morph from doing project monitoring to having projects contribute to regional monitoring programs.

Chair Nelson commented: But I think there are two criteria there. One of them is regional and I totally agree with that. The other is size. If somebody comes into us with a two-acre wetlands project are we going to ask them to model impacts on that project based on different sea level rise scenarios? We are probably not going to require that. But if you have a big salt pond project – you bet – we'll make you do that.

Commissioner McGrath added: Especially if you have more than a minor amount of fill. I think you put your finger exactly on it. This is a should/shall question. I know that we argue that all "shoulds" are "shalls" but they are really not. If you have a wetland that is now a freshwater marsh that with mitigation is going to evolve into a tidal marsh and it is small enough; that's a "should". But if you are doing something which will use more than a minor amount of fill to create a habitat, then that is a "shall" question.

Chair Nelson stated: We need to think about this because it has broader applications. I could imagine sending a message that says, we want to move from project-specific monitoring to a regional monitoring paradigm and at some point, we are probably going to say, "applicants – even if you want to your own monitoring project, we are not going to let you have one. We are going to make you be part of that regional monitoring program, but maybe you want to do some of your own site visiting stuff." I could easily imagine forcing applicants to contribute to a regional monitoring program just as we are saying – I think we should say to applicants who are planning habitat projects that we want to make a paradigm shift to regional habitat planning. I think we want to do the same thing on the planning and monitoring side.

Commissioner Galacatos commented: One, there are several initiatives looking at a regional, landscape level for future mitigation projects, and it is mostly being spearheaded by the Land Trust as well as with Caltrans where they are looking at this regionally bigger-than-just-the-watershed level for where these future mitigation projects should be. So that initiative is moving forward. The other one is there are a couple of initiatives right now looking at specifically the regional mitigation monitoring. It looks at what are all the different agencies requiring and is there a way that we can all kind of overlap so that the mitigation monitoring that is happening is worthwhile and we're getting data that can be important outside of just the confines of the permit from each agency. So that initiative is also moving forward. I think there are two different groups looking at that question.

The third thing I would say--which is one of the difficulties that at least we've seen in the Corps when people come in with proposals-- is that they do not have necessarily (unless they own the property like South Bay Salt Ponds and the U.S. Fish and Wildlife Service) they don't have necessarily the options of picking and choosing the sites that are available to them that would make sense in a regional perspective. They are going to be doing these projects because by and large most of these projects that are restoration-sounding are usually done because of mitigation requirements.

The only other thing that I will say is that you have to keep in mind that there are a lot of things that are going to be hampering the ability for some of these projects to be right where you want them, the exact things to match up and line up. It is not usually that easy.

Ms. Goeden added: And it's also not just mitigation projects. It is any restoration project that tends to be where property becomes available. Unless there is a willing seller you don't get to choose where you put your restoration site.

Chair Nelson stated: And if you are Fish and Wildlife, you are designing habitat projects for Fish and Wildlife and not Fish and Game. So for that direction towards more regional mitigation planning and more regional monitoring, does the Corp have formal regulatory policy to encourage that to happen, or is this just happening because of smart folks working together?

Commissioner Galacatos replied: It is more the latter. One of the things is trying to figure out the best overlap. We had the same initiative quite a few years ago, not for tidal wetlands but for vernal pools, and trying to have a regional approach to monitoring and part of the issue that we have to balance as a regulatory agency and other permitting agencies have is the limits of our authority to require how much monitoring and what we need to be able to require based on our mandate versus what everybody else would like us to require.

Chair Nelson continued: So with that experience in mind, for BCDC in terms of restoration planning and monitoring, do you think that some guidance like we are discussing about landscape, regional-level planning and monitoring is the right approach?

Commissioner Galacatos answered: I think Brenda actually hit upon it when she was speaking earlier, and it is sort of the issue of the temporal timeframe that you have for that project. And you touched upon it as well -- if you are going to have these restoration projects are you going to be having them to be successful and monitored for 25 years? Are you having them for 10 years? Or are you having them for 75 years? So that is something that really needs to be thought through in terms of what would be considered a successful project.

Chair Nelson continued: But we want to encourage folks to adopt a longer-term approach. We want to encourage folks to look 75 years out but at the same time in Brenda's case --

Ms. Goeden interjected: There is money involved.

Chair Nelson agreed: - yes, right. It is not going to be easy in terms of funds and site constraints and lots of other things. There are going to be projects that we will approve that where an agency will say to us -- no, this project has a limited lifespan and it is going to be mud flats in X number of years. And we are going to approve those projects and we should, but we also want to encourage that longer, temporal horizon.

Commissioner McGrath commented: Well certainly if we get the benefit of a marsh for a period of years and we don't lose a great habitat in the interim they are not responsible for sea level rise. So we've gotten a temporal gain.

I'd like to go back to the Sonoma Creek Project because I have been chewing on that and the U.S. Fish and Wildlife Service because I have some experience as a developer and as a regulator – Fish and Wildlife Service can be stubborn. (Laughter)

Chair Nelson added: And I learned that it is most of the time. (Laughter)

Commissioner McGrath continued: I don't want to create a mechanism where they get to do whatever they want without interacting with other agencies that have responsibilities. It may well be that their vision for the mouth of Sonoma Creek in terms of the amount of fill as a long-term fit into a regional landscape wasn't good enough. And I want to have the discretion as a Commissioner to be able to use the consistency authority and say – no, good start but you are not there yet. And your vision has to be bolder. So I go back to trying to distinguish and consider, as we remove the, "it must be minor fill" what are we going to replace to ensure the good science rather than "when" drives all these issues.

And I don't worry about the little projects because they'll be minor fill and they'll work on it. I want to make sure that all the agencies have a chance to look at the mouth of Sonoma Creek and say – whatever temporal loss we have is worth it for something that we think will be sustainable for this period of time. That is the public benefit and I think the public benefit test is there.

Mr. John Coleman of the Bay Planning Coalition had a question: I had a question related to all of this. The regional aspect sounds great but the issue that you talked about was the long-term cost. How many projects may not happen as a result of this that are good projects that would benefit the environment as well as protecting shoreline resiliency? So that has to go into the equation of what do we end up losing if we're mandating that some entity, SFO or a private developer who is going to pay 50 years into a monitoring program?

In going back, and it is not in here and I raised it a couple of meetings ago, maybe the way to help get a read of the business community is to start talking a little bit about the shoreline – what you are talking about here has benefits to the business community in terms of protecting assets and bringing in the economic benefits of doing this because then you are going to hopefully get the business community and others may be able to justify it in the business plan of spending the money if it is wed together. And it is not in here talking about the economic benefits of what you are looking at doing. The environmental benefits are very important but at some point, limited resources are going to dictate what can and cannot be done. And the public and the private sector are going to start looking at that at some point in time.

Chair Nelson added: And that interface between this habitat work and protection of assets is a really important concept to make sure we got up front. Travis always said the most important word in BCDC is "and". So we have to make the case and we want to make sure that we are not talking about protecting developed assets over here and protecting habitat over here – those two things can be brought together. We need to make sure that upfront we do that in that more general language.

Mr. Coleman added: I think you will wind up getting more support from the business community, and some of the agencies that have limited resources may be able to justify their expenditure on monitoring programs because they can then cite in their documents that we are going to be protecting these assets whatever they may be in doing the environmental protection and environmental enhancement and they can help justify the cost that may go along with the monitoring.

Chair Nelson stated: And that's a great example because if you are a developer and you're building a development here and habitat there our traditional approach is to say you monitor your marsh and send us annual reports. But in the future, we want that to transition to a world where these are green infrastructure strategies to maintain habitat and provide protection and that work has to be done on a regional basis and the monitoring shall be done on a regional basis – that is habitat and economic benefits.

Mr. Coleman responded: There are going to be those who argue against regionalism for whatever reason – I am not in that camp because I think if you want to have success, you are going to have to look at things from a regional perspective. But you have to build the case of – why? And the economics and the environment are mutual, but we often don't look at it that way.

Chair Nelson continued: And on the monitoring mandate it is important for us to say that we want to encourage this landscape planning and regional planning for habitat restoration and monitoring but we don't have a regional monitoring program yet for these issues that we could mandate folks contribute to.

Mr. Coleman replied: And when you start talking about that the red flags are going to go up – I guarantee it.

Chair Nelson agreed: Yes, yes. We want to encourage it but we're nowhere near a mandate. At some point we may have a program and at that point we may migrate to a point that says -

Mr. Coleman pointed out a restriction: Well you don't have the legislative authority to do it either.

Mr. Goeden chimed in: What if my triangular space on this picture I have drawn (showing drawing to group) was originally identified for habitat adaptations area here, and then you had all these little projects that came online at different times but the region knows they want regional, landscape scale restoration but then the habitat restoration community comes in-- and I am going to do this piece, that piece and that piece but it is five years here and seven years here – it shows a regional effort and I am thinking that this might something if we get into this world of regional, habitat landscapes but we don't have the ability because we don't have the money or whatever issues the land available at all the same time; we just identified this site; now we are going to work at building those sea beds.

So then how do we link each project into that long-term strategy given that they will have limitations not only in property size but probably funding and ability to maintain it into the future because it might be different entities? I can see this happening because unless we get

another South Bay Salt Ponds which there are very few places on the landscape that we could actually do that (which could be the Sonoma Creek area). If we are seriously trying to go towards a regional habitat landscape adaptation world, we might want to think about a construct like this drawing because this could be how it happens.

Ms. Showalter commented: And in standard planning those are opportunity areas. There is no reason we couldn't do that in the Bay. We have El Camino Real as a transit-oriented development zone. And you have different rules there than you do other places. I think that is a great idea. But the other I would like to add to what you said is that I have seen a lot of restoration projects over my career that didn't go forward because of the cost of the monitoring. And to me we really want to flip that on its head because we need these restoration projects for all of the sea level rise and climate change reasons that we all know. We really need to encourage them. I think we want to come up with a message to support small projects.

Commissioner Galacatos commented: So I am just going to counter that having been on the other side of that. I think monitoring is really important because 1) that is the only way we get the science to move forward and –

Ms. Showalter interjected: Oh I agree. It is just finding another source of income for it.

Commissioner Galacatos continued: - yes, but what I am saying is that we have had a lot of situations where our restoration projects had a hard time with monitoring. And if they don't seem to be going well and we don't have the monitoring on the ground, we never have the data to figure out why it didn't work and not find ourselves with more projects that aren't working. There has to be a balance. And I totally agree with you that you don't want to make it too burdensome, but we have to know that we are getting some information that is useable to move the science forward to know.

Chair Nelson interjected: To make better decisions over time. We have a substantial amount of document left.

Ms. Hall had a suggestion: Maybe in the interest of time we'll just ask for the remaining portions if there are any major red flags.

Chair Nelson added: And I was going to suggest a lightning round. I have a couple of things that I would like to suggest. We should give everybody a chance to throw some ideas out and just plan to move on by ten 'till.

Ms. Hall continued: The sections left are: pilot projects, fill placement methods and shoreline protection.

Chair Nelson stated: So a lightning round which means that the rules change. These are brainstorming rules so let's not respond to the other person's ideas. Let's throw some ideas out there and if people want to respond let's provide a deadline and we can do a written round of comments.

And so I have a couple of big, picture thoughts I wanted to throw out there and then let's go around the room.

Pilot projects; we have a chair who feels very strongly that we have a flawed paradigm today that isn't going to serve us well in the future. While we say, build a pilot project and come back and talk with us in a decade and we will think about the next step forward. We need to be more aggressive, but we need to put some bounds on that. We're not going to open the door to any wacky project. We want to make sure that we are driven by real science, but we are going to be less risk-averse in the future than we have been in the past. And I think that means a different approach to pilot projects. I'm not sure exactly what – the only suggestion I've got there is to recognize that in order to address the countervailing risk, which is acting too slowly, we're going to be willing to accept more risk in the future than we might have in the past. And one of those approaches – I could imagine if we've got a two-acre, pilot project and we don't know yet if that project is working; if somebody comes in and says, I have a 5,000-acre project that is the same thing, we might not be willing to accept that risk. But if somebody comes to us and says, okay – I want a 20-acre project, we might say, yep. We don't have the results from pilot project X but we are willing to accept that risk. I don't know exactly how to manage that risk and let's not have that discussion yet but I think we want to recognize that we are willing to accept more risk and we need to be more aggressive about the transitions from pilot to full-scale projects and I think size matters in this context.

Another thought is when is green infrastructure appropriate over gray infrastructure? And we want to have policies around that. Do we have policies that explicitly talk about that – maybe we do?

Ms. Hall replied: We do.

Chair Nelson continued: I am not sure if we need to – and there are places where we want to see green infrastructure even where there are real constraints in urban settings where it may be hard but we want to encourage that. So I'm not sure how much deeper we need to drill on that issue.

And when a project is considered habitat protection versus shoreline development; I think we're more willing to accept risk on the habitat side than we are in terms of protecting assets because we don't want to – I could imagine us going from a two-acre pilot project to a 20-acre pilot project and acknowledging that there are risks that come from that. But I am really hesitant to do that if we are protecting a community behind a dike. Yes, I want to accept some risk, but we might calculate those risks differently when we are talking about habitat projects than when we are talking about projects that are protecting people and property.

Commissioner McGrath commented: I want to put in place a planning process and requirement for major fill that will serve us for the next 20 years; beyond that we don't know the societal changes that sea level rise will cause. They are going to be far beyond our imagination. When I do that I think about what are the really big projects that are flooding now that we will protect? And to John's point I think the comparison is what kind of protection do you have? I mean we are going to protect 101 and we're going to protect Highway 37. And we are going to protect 80 but it is not, for the most part, at risk for the next 30 or 40 years.

If we want to have a framework to evaluate a minimal fill project where you just go up and you keep your footprint of fill minimal versus something that might involve some type of green fill, a marsh; and I think of the Bay Trail across the marshes next to 101 in Marin County – those are at risk right now. The highway is at risk right now. So how do we set up a series of policies that allow us to have a robust but not a non-discretionary policy to evaluate what are the net benefits of a minimized fill footprint versus a green infrastructure footprint and consider the loss of habitat and the loss of recreation? Because I think that is the one that is going to come at us first. I think 101 is also flood prone in the South Bay but it is pretty urban. That is the one where you have a big marsh.

Ms. Showalter commented: Under the fill placement methods I thought this was really good. This is basically the ongoing study of best management practices. And we need to somehow include in this that best management practices are evolving. They are connected to monitoring and we need to communicate that out so they are used. It is a process, the monitoring and management; they feed each other and it is a feed loop and we need to make sure that this happens.

Another thing that we talked about previously – just using plain English is important. I think the minor amount of fill and the minimal fill is very confusing. We want to go for correct fill or appropriate fill – I’m not sure exactly what the words are but using plain English is important.

Finally, we need to push to identify the economic benefit of habitat restoration and the correct amount of fill to make that happen. We need to make sure that those things are really well connected.

Mr. Coleman added: Just very quickly on green and gray; they can be done together. The way you read this it is like to the green or gray. And you can do both together, and the gray may be where we are protecting assets and the green is the environmental benefit for the Bay and the aquatic environment. So maybe it needs to talk about not mutually-exclusive but in appropriate cases they can be done together.

Ms. Kelly Malinowski of the State Coastal Conservancy asked: Megan I have a quick question. We provided written comments on this. Will that be presented to the Working Group?

Ms. Hall replied: Yes, I can share it.

Ms. Malinowski continued: At the Coastal Conservancy we provided written comments on all these questions and added some things. We did put a lot of thought into our responses.

Chair Nelson directed the conversation: Shall we go back to agenda items 3 and 4?

Ms. Hall replied: Yes, they are inter-connected.

**6. Adjournment.** There being no further business, Chair Nelson adjourned the meeting at 12:25 p.m.